

**From:** Guivetchi, Kamyar [<mailto:kamyarg@water.ca.gov>]  
**Sent:** Friday, January 07, 2011 9:33 AM  
**To:** Macaulay, Terry@DeltaCouncil; Gwen Buchholz; Farber, Aaron@DeltaCouncil  
**Cc:** Sims, Susan; Hoagland, Ray; Rich, Jim; Woods, Jean; Morris, Ed; Pegos, David@CDFA; Josh Eddy  
**Subject:** DWR comments on Dec. 6 draft Delta agriculture white paper

Terry, Gwen and Aaron:

I'm forwarding you this email with attachments from Jim Rich with our Economic Analysis center of expertise providing comments on the December 6 draft of the Delta Agriculture White Paper. Jim sent these comments to Aaron in mid-December, and we are hopeful that the next publicly-posted draft of this white paper will reflect (or at least consider) Jim's suggested changes.

Feel free to post these comments on the DSC public comments website if you like, and contact Jim if you have questions about his comments.

Thank you.

Take Care,

Kamyar

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**Kamyar Guivetchi, P.E.**

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**From:** Rich, Jim  
**Sent:** Wednesday, January 05, 2011 1:26 PM  
**To:** Guivetchi, Kamyar  
**Cc:** Hoagland, Ray; Woods, Jean; Morris, Ed  
**Subject:** My comments on the draft DSC white paper on Delta agriculture

Kamyar:

Per your request of Ray, I am sending you copies of my two papers with comments on the draft Delta Stewardship Council white paper on Delta agriculture. I sent the first

paper to DSC staff on December 15; the second one on December 20. I sent both papers to Aaron Farber, the DSC's Executive Fellow, who had requested them. In the cover e-mails, I suggested a meeting of myself, Jean Woods, and Ed Morris with DSC staff to discuss the Delta ag. white paper. That offer has not been accepted.

I checked this morning, and learned that the latest version of the DSC's Delta ag. white paper, which they introduced and summarized in their new newsletter (sent yesterday to everyone on the Council's "information" and "media" e-mail lists), is still the old December 6 draft which I reviewed in the attached papers.

It could be that staffing or funding issues have prevented them from making any changes to their December 6<sup>th</sup> draft report, or from meeting with us. Or perhaps my e-mails to the DSC were lost somewhere in the bureaucratic maze. In any case, I am still willing to meet with the DSC staff to discuss the DSC's Delta ag. white paper. And Jean and Ed may still be willing and able to do so as well.

If you decide to send the attached comments to your contact at the DSC, I recommend you include the usual caveat, which I included in each of my e-mails to Mr. Farber:

Because the attached document has not been approved for release to the general public as an official DWR publication, I ask that you make it available only to the DSC and other federal, State or local government agencies that are involved with Delta issues. Thanks.

Please feel free to contact me if you have any questions about this e-mail or its attachments. Thanks.

Jim Rich  
Economist,  
California Department of Water Resources  
916-653-6763  
United We Stand

**A Review of the First Part of the 6 December 2010 Draft Consultant's Report for the Delta Stewardship Council, *Delta as a Place: Agriculture White Paper***

By Jim Rich, DWR Economist, 12/15/10

I have reviewed the first 18 pages of the unidentified consultant's draft 12/6/10 report to the Delta Stewardship Council, *Delta as a Place: Agriculture White Paper*. Although this document has been released to the general public, it has not yet been finalized. Based on what I have read, the draft white paper appears to be inadequately documented, and contains numerous misleading or confusing statements, and has estimates which are quite different from the latest DWR estimates about Delta agriculture, including values in Bulletin 160-09, and preliminary estimates produced by the 2007 DWR Land Use Survey of the Legal Delta.

For instance, the second paragraph of the draft DSC report states, "Agriculture is currently the principal land use in the Delta. Total acreage in agricultural lands has declined from about 597,400 acres in 1984 to about 531,010 acres in 2008." No reference is cited for this estimate. According to the preliminary results of the 2007 DWR Land Use Survey of the Delta (given to me on Monday by Jean Woods), Delta crop acreage in 2007, excluding fallowed fields, but including "native pasture" and "mixed pasture, partially irrigated", totaled only 427,549 acres. So the 2008 DSC estimate is 24.2 percent greater than the 2007 DWR estimate. More than 100,000 acres separate the two estimates.

So, I propose that we relay to the DSC our request for a meeting with the lead author of this draft DSC white paper at her earliest convenience, to discuss how she arrived at the numbers in her report, and to share with her the latest DWR estimates and information concerning Delta agriculture. Three or four DWR authorities on Delta agriculture would attend this meeting with the white paper's lead author.

Here are some more problems with the draft DSC white paper on Delta agriculture:

From the second paragraph: "About 75 percent of the Delta's total land area is classified as Prime Farmland, which is defined as land with the best physical and chemical characteristics, and a reliable irrigation water supply." This is a rather simplistic definition. Somewhere in this report should be a better definition, such as this excerpt from the official NRCS definition:

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

From the fourth paragraph (on Page ES-1): “California is the leading agricultural producer in the nation, with 14 percent of the nation’s agricultural GDP. Although the value of California’s agricultural production is large, approximately \$38 billion in 2009 (U.S. Department of Agriculture, 2010) ...”

The term “agricultural GDP” is not commonly used by either economists or those who compile agricultural statistics. In more than 30 years with DWR, this is the first time I have seen that term. And the “\$38 billion in 2009” figure is not accurate. Here is how USDA, NASS, CFO (in cooperation with CDF&A) describes the size of California agriculture in 2009:

California agriculture experienced a 9 percent drop in the sales value of its products for 2009. The state’s 81,500 farms and ranches received \$34.8 billion for their output last year, ...

California remained the number one state in cash farm receipts in 2009, with its \$34.8 billion in revenue representing 12.3 percent of the U.S. total. The state accounted for 16.5 percent of national receipts for crops, and 6.5 percent of the U.S. revenue for livestock and livestock products. [From *California Agricultural Statistics, 2009 Crop Year*; USDA, NASS, CFO; December, 2010.]

Starting on Line 41 of Page ES-1: “Although the exact contribution from the Delta to the state’s GDP is unknown<sup>1</sup>, the value per acre contribution is greater than other agricultural regions in the state.” This is not correct. The Napa Valley, Salinas Valley, the Oxnard Plain, the west side of the southern San Joaquin Valley, and the Coachella Valley are all major agricultural regions in California which have seen a lot higher \$/acre average gross revenue values in recent years than the Delta. According to the preliminary results of my ongoing survey of Delta agriculture, during the 2005-09 period, the top four Delta crops, in terms of acreage, were all lower-valued field crops.

From the first paragraph of Page ES-2:

It has been estimated that the Central Valley region, including the Delta, contributes two thirds of the state’s agricultural value (Trott, 2007). The five-county Delta region has consistently contributed (in 2007 dollars) more than \$2 billion annually in agricultural gross value (Trott, 2008), and the most recent estimates indicate that the Legal Delta area contributes almost 25 percent of that (DWR, 2007c).

These statements are misleading. Delta agriculture is only a small part of Central Valley agriculture. And although the cited DWR report was completed in February 2007, all of its statements apply to averages during the 1998-to-2004 period.

Also from the first paragraph of Page ES-2:

Delta agriculture contributes to at least 41 out of the 55 top-value crop exports in California. In 2008, California’s agricultural exports reached an all-time high of \$12.9 billion, a 16 percent increase from 2007, and nearly a third of the Delta’s total agricultural value (UC Davis, 2010).

These statements are also misleading or inaccurate. Delta agriculture's contributions to almost all of the "41 out of the 55 top-value crop exports in California" have been rather minor in recent years. And if California's agricultural exports were valued at \$12.9 billion in 2008, that cannot possibly represent "nearly a third of the Delta's total agricultural value," for that would value Delta agriculture in 2008 at more than \$38.7 *billion*, and absurdly high number.

From the second paragraph of Page ES-2:

"... virtually every one of the crops from this diverse Delta agricultural palette, from field crops to blueberries, produces greater yields and fetches higher per unit prices than do most other growing regions of these crops in the state ..."

This statement is either inaccurate or misleading. Average yields and unit prices for some common Delta crops are slightly higher than for those some crops grown in some other major California growing areas. But the above blanket statement is not be supported by official statistics. For instance, alfalfa is by far the largest crop in the Delta, with more than twice the acres of the number two crop (corn grain) during the 2005-09 period. Most of the Delta's alfalfa is in San Joaquin County, and most of San Joaquin County's alfalfa is in the Delta. The average yield for San Joaquin County alfalfa in 2009 was 6.82 tons per acre, according to the County Crop Report. Here are the average 2009 alfalfa yields for four major alfalfa growing counties in other parts of the state, according to their Crop Reports: Fresno: 7.47 tons/acre Tulare: 9.05 tons/acre Kern: 7.34 tons/acre Imperial: 7.02 tons/acre. All of these values are greater than the San Joaquin County value.

The average price for San Joaquin County alfalfa in 2009 was \$120/ton, according to the County Crop Report. Here are the average 2009 alfalfa prices for four major alfalfa growing counties in other parts of the state, according to their Crop Reports: Fresno: \$124/ton. Tulare: \$109/ton. Kern: \$100/ton. Imperial: \$108/ton. One of these values is greater than the San Joaquin County value.

Concerning Line 43 of Page ES-2: Truck crops are not any less intensive crops than are orchards and vineyards.

Concerning Lines 1 and 2 of Page ES-3: Earthquakes in the East Bay or western Delta region should be added to the list of possible "threats and future risks" facing Delta agriculture.

Concerning Line 6 of Page ES-3: Six counties contain the legal Delta. Don't forget Alameda County, which also has agriculture in the Delta.

From Lines 17-to-19 of Page 1-2: "Draft versions of the EIR chapters that are related to the existing and projected future conditions without implementation of the Act will be provided in early 2011 for review by the Council and the public." I hope that DWR staff will be given a chance to review these draft chapters before they are released to the public.

From Line 43 of Page 3-2: "Delta agriculture's per-acre yields are almost 50 percent higher than the state's average." This strong, sweeping, unattributed statement cannot be supported by

official statistics, for statistics on average Delta crop yields are not kept. However, San Joaquin County is by far the most important county for Delta agriculture. According to preliminary results of my ongoing survey of Delta agriculture, 45 percent or more of San Joaquin County's acreage of ten important Delta crops were located within the Delta portion of the county during the 2005-to-2009 period. Average statewide yields for 2008 (the most recent year for which such estimates are available) are available for these important crops in the San Joaquin County portion of the Delta. Let us compare San Joaquin County yields with average statewide yields for 2008 for these ten crops. Yields are given in tons per acre:

CROP	SJQ Yield	CA Yield
Dry beans	1.38	0.925
Corn grain	5.18	5.46
Alfalfa hay	6.90	7.00
Corn silage	27.77	26.50
Wheat	2.80	2.71
Asparagus	1.52	1.45
Sweet corn	5.04	8.00
Potatoes	16.50	19.15
Tomatoes, proc.	40.50	42.37
Pears	20.00	16.20

From the above table we can see that for five of the ten crops, the statewide average value is greater than the San Joaquin County value. And for four of the five crops where the San Joaquin County value is greater than the statewide average value, the difference is slight. The above table refutes the white paper's claim that "Delta agriculture's per-acre yields are almost 50 percent higher than the state's average."

Concerning Lines 23 and 24 of Page 3-3: Please see my above comment on how much higher the White Paper's estimate of Delta farmland is than DWR's latest estimate.

Finally, concerning Lines 28 and 29 of Page 3-3: "About 75 percent of the Delta's total land area is classified as Prime Farmland ..." This statement is contradicted by the box just to the right of it on Page 3-3, which states that "About half of Delta land is Prime Farmland."

I only had time to review the first 18 pages of this 67-page draft white paper for the DSC on Delta agriculture. Based on how many problems I was able to uncover in those few pages, I believe a sit-down meeting of DWR authorities on Delta agriculture and the lead author of this white paper is needed before this draft is finalized.

**A Review of the Second Part of the 6 December 2010 Draft Consultant's Report  
for the Delta Stewardship Council, *Delta as a Place: Agriculture White Paper***

By Jim Rich, DWR Economist, 12/20/10

On December 13 and 14, I reviewed the first 18 pages of an unidentified consultant's draft 12/6/10 report to the Delta Stewardship Council, *Delta as a Place: Agriculture White Paper*. Based on what I have read, the draft white paper appears to be inadequately documented, and contains numerous inaccurate or misleading statements, and has estimates which are quite different from the latest DWR estimates about Delta agriculture, including preliminary estimates produced by the 2007 DWR Land Use Survey of the Legal Delta.

I detailed my concerns with the first part of the draft Delta agriculture white paper in a December 15 draft paper which I e-mailed to DSC staff. This new paper reviews the rest of the draft 12/6/10 report to the DSC.

Concerning Table 3-1 on Page 3-4, the 19<sup>th</sup> page of the white paper: If we take the 737,676 "legal Delta acres" in 1984, and subtract out the acres of "Urban and Built-Up Land", "Other Land", and "Water", we are left with 593,583 acres of agricultural land. This figure is far above DWR's estimate of Delta farmland at that time.

Concerning Table 3-2 on Page 3-4:

If we take the 737,674 "legal Delta acres" in 2008, and subtract out the acres of nonagricultural or natural vegetation, other land, confined animal agriculture, rural residential land, semi-agricultural and rural commercial land, urban and built-up land, vacant or disturbed land, and water, we are left with 541,051 acres of agricultural land. This figure is 113,502 acres greater than DWR's preliminary estimate of 2007 Delta farmland: 427,549 acres. DWR's estimate, which should be finalized in March or April, includes all cropland, plus native pasture, mixed pasture, and partially-irrigated pasture.

Concerning Page 3-5, Lines 5 – 7: Although the white paper's estimates of Delta farmland in 1984 and 2008 are well above DWR's estimates for those time periods, I agree with the statement, "the amount of urban land on the periphery of the Delta near Oakley, Brentwood, Tracy, and Lathrop increased noticeably from 1984 to 2008."

From Page 3-8, Line 3: The phrase "maintaining land in agricultural use" should be changed to "maintaining land in agricultural use for a set time period, usually ten years."

Concerning Page 4-1, Lines 7 – 15: Using the latest BEA statistics, I have confirmed the accuracy of the paper's estimate of 2009 California GDP of \$1.9 trillion. The paper then claims that "Crop and animal production comprises almost one percent of the state's total GDP (Bureau of Economic Analysis, 2010)." One percent of \$1.9 trillion is \$19 billion. However, the same BEA table (available at <http://www.bea.gov/regional/gsp/action.cfm>) that lists \$1.89 trillion as California's 2009 GDP, shows the "Agriculture, forestry, fishing,

and hunting” sector of California’s economy as having a 2009 GDP of \$22.8 billion. For the “Crop and animal production (Farms)” subsector within the larger “Agriculture, ...” sector, the table shows only “n/a”. Given how large crop and animal production is in California, compared to forestry, commercial fishing, and commercial hunting, it is quite possible that GDP from “crop and animal production” could comprise more than one percent of California’s GDP.

Also, the important claim that “California is the leading agricultural producer in the nation, with 14 percent of the nation’s agricultural GDP” is unattributed. There is no indication if this figure applies to 2009 or 2008 or some other recent year. And it is expressed in an unusual manner (“agricultural GDP”) that is not commonly used by those involved with California agriculture.

Instead, here is how USDA, NASS, CFO (in cooperation with CDF&A) describes the relative size of California agriculture in 2009:

“California remained the number one state in cash farm receipts in 2009, with its \$34.8 billion in revenue representing 12.3 percent of the U.S. total.” [From *California Agricultural Statistics, 2009 Crop Year*; USDA, NASS, CFO; December, 2010.]

Concerning the text box in the lower right-hand part of Page 4-1: None of these “quick facts” are attributed. Many of the terms, such as “value” and “agricultural output” are vague and not defined. The year or time period to which the estimate applies is usually not given. And the box’s claim that “California agriculture represents 17% of national agricultural output” contrasts with the claim just to the left of that box that California accounts for “14 percent of the nation’s agricultural GDP.”

Concerning Page 14-1, Line 17 to Page 14-2, Line 1: “Although the value of California’s agricultural production is large, approximately \$38 billion in 2009 (U.S. Department of Agriculture, 2010), ...” This claim is contradicted by the above-cited 12/10 USDA document, with its estimate of \$34.8 billion in California farm revenue in 2009.

Concerning Page 4-2, Line 4: There are many other, far more important, measures of “indirect economic activities related to agriculture” than the two listed here. As farm output is hauled, sorted, chilled, packed, milled, dried, canned, frozen, hulled, shelled, ginned, processed, packaged, stored, insured, marketed, and transported, it increases in value – often several times greater than its original farmgate value.

Concerning Page 4-2, Line 4: The statement that “the value per acre contribution [of Delta agriculture] is greater than other agricultural regions in the state” is either inaccurate or misleading. While there are a few important agricultural regions in California where the average gross revenue per acre value is less than that of the California Delta, there are even more regions where, year-after-year, an average or typical acre of irrigated farmland provides greater gross revenue or value than it does in the Delta. These regions include the Napa Valley, Salinas Valley, the Santa Maria River Valley, Oxnard Plain, the west side of the southern San Joaquin Valley, and the Coachella Valley.



From Page 4-2, Lines 14 – 17:

In addition, “virtually every one of the crops from this diverse Delta agricultural palette, from field crops to blueberries, produces greater yields and fetches higher per unit prices than do most other growing regions of these crops in the state” (California Department of Food and Agriculture, 2008).

In which CDF&A document did the authors find this extraordinary statement? On the third page of my 12/15 review of the first 18 pages of the draft DSC white paper on Delta agriculture I evaluated the accuracy of this claim by comparing alfalfa yields and prices for San Joaquin County with alfalfa yields and prices for four other major alfalfa-growing regions. On the next page I compared average 2008 statewide yields for ten important Delta crops with the average 2008 yields for those crops in San Joaquin County. These comparisons did not support the above contention.

Page 4-2, Lines 18 – 20:

The five-county Delta region has consistently contributed (in 2007 dollars) more than \$2 billion annually in agricultural gross value (Trott, 2008), and the most recent estimates indicate that the Legal Delta area contributes almost 25 percent of that (DWR, 2007c).

The cited DWR report cannot be the source of the “almost 25 percent” estimate, for it is a Land Use Survey, which does not contain information on the value of farm output. The 25 percent claim is probably based on another DWR report, which the white paper cites as “DWR, 2007a”. That report is my 2/07 draft DWR paper, *The Value of the Agricultural Output of the California Delta*. That paper is based on data for the 1998-to-2004 period. It does not compare the value of Legal Delta agriculture with the value of agriculture in the five counties which contain the large majority of Delta agriculture. Instead, it compares the value of Delta farm output with farm output in all six counties which contain the Delta. It found that during the 1998-2004 period, an average of 26.4 percent of the gross agricultural revenue for those six counties came from within the Delta. If one excludes Alameda County from the list of “Delta counties”, then, according to my calculations using data from Page 5 of my 2/07 report, Delta agriculture contributed about 26.8 percent of the total gross value of agricultural output in the five counties during the 1998-2004 period. That is more than the “almost 25 percent” estimate attributed by the white paper’s authors to the 2007 DWR study.

Concerning Page 4-2, Lines 25 – 26: The text should be changed to read, “The area within the Delta has a higher percentage of field crops and a lower percentage of permanent crops such as vineyards and trees *than most other major agricultural areas in California.*”

From Page 4-2, Lines 31 – 32: “Commodities such as turkey and eggs are likely products of Delta agriculture.” I am not aware of any turkey or egg operations in the Delta.

Concerning Page 4-2, Lines 33 – 34: “Some commodities such as raisins and cottonseed byproducts may be created from Delta crops, ...” Neither raisin grapes nor cotton are grown in the Delta.

From Table 4-1 on Page 4-2: What is the source of the 2007 rankings of the top Delta crops by acres and gross revenues? If it is the 2007 DWR report, then that information is for the 1998-2004 period, not 2007. If it is from the County Crop Reports, then the Crop Reports for Crop Year 2009 should be consulted, for an up-to-date ranking.

Concerning Page 4-3, Line 2: “Of these agricultural jobs, nearly 25 percent are in the Delta.” What is the source of this statement?

Concerning Page 4-3, Lines 17 – 32: To what year or years do these estimates apply? Because the BAE report was published in 2010, these numbers cannot be for 2010.

Concerning Page 4-3, Lines 35 – 36: “However, agricultural employment declined in the Delta between 2002 and 2008, while overall employment and agricultural exports increased.” There are no published estimates for how much of the Delta’s agricultural output was exported each year.

Concerning Page 4-3, Lines 8 – 10: “Adjacent to the Suisun Marsh in wetlands and lowland grasslands, grazing and grain crops are the primary agricultural land uses.” One or more typos have made this sentence grammatically incorrect, and unclear in meaning.

Concerning Table 4-2 on Page 4-6: The source of this table is given as “DWR, 2007c; AECOM, 2010.” The values in that table are claimed to be for 2007. Yet they obviously cannot be for 2007, if their source report was published in 2007. The cited DWR report is from the “Land and Water Use Office. Land Use Surveys.” Yet I recently received from the person in charge of the DWR 2007 Land Use Survey of the Delta, a preliminary estimate of “Total Delta Crop Acreages” (including marginal crops such as “mixed pasture, partially irrigated) for 2007. That estimate is for only 427,549 acres – far below the total of 483,666 acres in Table 4-2.

This issue is important, for Delta agriculture has changed a lot in recent years. For instance, according to preliminary results of the ongoing DWR survey of the value of Delta agriculture, at least 95 percent of the asparagus acreage in the six Delta counties (including Alameda) lay within the Delta during the 2005-to-2009 period. And total asparagus acreage for those six Delta counties fell from 15,700 acres in 2005 to just 7,400 acres in 2009.

Also, the crop value numbers shown in Table 4-2 cannot be from the cited DWR report, for DWR Land Use Surveys do not contain estimates of the value of the crops produced on the lands being surveyed.

Concerning Page 4-6, Lines 7 – 9: “Each county reports average crop yields and prices for the entire county, not specifically for the Delta. However, crop markets are regional rather than

specific to a subregion of a county, so the countywide averages for crop prices are representative.” This statement contradicts the claim, made elsewhere in the white paper, that crop yields and prices in the Delta are often higher than they are in surrounding parts of the Delta counties.

Concerning Figure 4-5 on Page 4-7: For what year or years is the information displayed in this figure? The source of the figure is a report published in 2010, so the information displayed must be from an earlier year or time period.

From Page 4-8, Line 1: “As seen in Table 4-2, the top grossing irrigated crops were, in order, asparagus ...” It has been many years since asparagus has been the top grossing crop in the Delta. Preliminary results of the ongoing DWR survey of Delta agriculture has asparagus as the Number 6 ranked agricultural commodity, and fifth-ranked irrigated crop, in terms of average gross revenue during the 2005-to-2009 period.

From Page 4-8, Lines 25 and 26: “The Delta has seen a significant shift to higher value permanent crops, such as fruit trees, nuts, and vineyards.” There are very few acres of nuts grown in the Delta.

Concerning Page 4-9: The source of the two figures, which are said to apply to the white paper’s five-county Delta agriculture, is cited as a DWR report which used a six-county Delta agriculture. Have the values in those figures been properly adjusted to reflect the slightly different regions being evaluated?

From Page 4-10, Line 9, to Page 4-11, Line 2: The numbers cited from the DWR report apply to the six-county Delta region. They may not be accurate for the white paper’s five-county Delta.

From Page 4-11, Line 13, to Page 4-13, Line 6: This section on “Agricultural Exports” has little relevance, because in recent years relatively little of the Delta’s agricultural output has been exported, when compared to regions such as the Salinas Valley or the west side of the southern San Joaquin Valley. This has been due to the Delta’s crop mix and the relatively small size of most Delta farms.

From Page 5-1, Lines 8 and 9: “The extent and intensity of agricultural development over the past century has irreversibly changed the natural ecosystem.” I suggest replacing “irreversibly” with “substantially.” Leaders of the “Restore the Delta” movement argue that many of the Delta’s agricultural lands can be restored to native habitat. In some areas of the Delta, such as Prospect Island, that restoration process is now underway.

Concerning Page 5-3, Line 8: “Row crops” should be changed to “some row crops.”

Concerning Page 5-4, Lines 17 – 22: But can these “crops” be profitably grown in the Delta, in the manner that the study’s authors envision?

Concerning all of Section 5: Somewhere in this chapter should be a brief discussion of the effect of unscreened agricultural water diversions in the Delta on the health of the Delta ecosystem.

From Page 6-2, Lines 9 and 10: Concerning “although the acres of land devoted to agriculture decreased in the past 20 years, the overall value of Delta crops increased.” The phrase “real, inflation-adjusted” should be placed in front of “value.”

From Page 6-2, Lines 35 and 36: “The Delta’s levee system continues to decline due to failing levee integrity and subsidence.” This blanket statement is not accurate. The condition of many Delta levees has been significantly improved in recent years, thanks in part to State-funded levee maintenance and improvement programs.

Concerning Page 6-2, Lines 41 and 42: Where did this experiment occur? How long did it take to build up the peat soil by “up to two feet”?

Concerning Page 6-3, Lines 1 – 7: The risks of sudden levee failures due to an earthquake in the Bay Area or the Delta should be discussed in this section.

From Page 6-3, Lines 12 – 15: Cotton is not grown in the Delta. And overall, global warming throughout this century would be bad news for Delta wine grape growers.

Concerning Page 6-4, Line 7: The word “local” should be put in front of “coalition.”

Concerning Page 6-4, Lines 10 – 19: Some of this text is not very relevant to the Delta. More should be said about the unique water supply issues facing Delta growers.

Concerning Page 6-4, Lines 40 – 42: There must be one or more typos or missing words in this sentence. As written, it makes no sense.

Concerning Section 7, References: The references in this report are more numerous and complete than in most similar reports I have read over the years.

Concerning Appendices A and B: The material in each of these sections was obviously copied from other documents. Those documents should be cited in these appendices.